United States Environmental Protection Agency | Air and Radiation (6205J) | EPA 430-F-93-057 December 1993

EPA

Stratospheric Ozone Protection

Final Rule Summary

THE ACCELERATED PHASEOUT OF OZONE-DEPLETING SUBSTANCES

Background

In July 1992, EPA issued its final rule implementing section 604 of the Clean Air Act Amendments of 1990. That section limits the production and consumption of a set of chemicals known to deplete the stratospheric ozone layer. EPA controls production and consumption by issuing allowances or permits that are expended in the production and importation of these chemicals. These allowances can be traded.

The July 1992 rule required producers of class I substances (chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform) to gradually reduce their production of these chemicals and to phase them out completely as of January 1, 2000 (2002 for methyl chloroform). In addition to these production limits, the rule required a similar reduction in consumption, defined as production plus imports minus exports.

On February 11, 1992, the United States, responding to recent scientific findings, announced that the production of chlorofluorocarbons (CFCs), halons, carbon tetrachloride, and methyl chloroform would be accelerated and that these substances would be phased out by December 31, 1995. It was also stated that the U.S. would consider recent evidence suggesting the possible need to phase out methyl bromide. At the same time, the Agency received petitions from environmental and industry groups to accelerate the phaseout of these chemicals.

In addition, the fourth meeting of the Parties to the Montreal Protocol took place in Copenhagen in November 1992. At this meeting, the Parties made a number of decisions which are reflected in this final regulation. This regulation implements the United States' obligation to the recent agreements made in Copenhagen by the Parties to the Protocol and implements the accelerated phaseout of ozone-depleting substances while responding to the petitions received by the Agency from environmental and industry groups.

The Parties to the Protocol agreed to accelerate the phaseout of CFCs, carbon tetrachloride, and methyl chloroform to the end of 1995 and halons to the end of 1993. In addition, the Parties agreed to add hydrobromofluorocarbons the the class I list and phase them out by the end of 1995. In accordance with these agreements, this regulation schedules the phaseout of these chemicals by these dates.

The recent United Nations Environment Programme (UNEP) Scientific Assessment identified methyl bromide, widely used as a soil fumigant, as a significant ozone-depleting compound. The parties set an ozone depletion potential of 0.7 for this chemical. Starting in 1994, this regulation freezes the production and consumption of this chemical at 1991 levels through the year 2000. The Agency is obligated under the Clean Air Act to phase this chemical out by the year 2001.

The Final Regulation

Specifically, EPA is reducing production and consumption levels and phasing out the production and consumption of the major ozone-depleting chemicals. In addition, methyl bromide and the HBFCs are added to the list of class I substances and scheduled for phaseout. The phaseout schedule, in terms of percentage of baseline production allowed, is presented on the following page.

The Parties also agreed in Copenhagen to completely phase out the production and consumption of hydrochlorofluorocarbons (HCFCs) by the year 2030. Production and consumption would be limited to a cap equal to 3.1 percent of CFCs consumed in 1989, weighted by ozone-depletion potential, plus the consumption of HCFCs in the same year, also weighted by ozone-depletion potential. Parties would reduce this cap by specified reductions, culminating in a complete phaseout by 2030. Although less harmful than CFCs, these chemicals do deplete the ozone layer and, if left unchecked, would contribute to this problem.

The Agency intends to meet these limits by accelerating the phaseout of HCFC-141b, HCFC-142b and HCFC-22. These are the most damaging of the HCFCs. By eliminating these chemicals by the specified dates, the Agency believes that it will meet the requirements of the cap approved by the Parties. The controls on HCFC-141b, HCFC-142b and HCFC-22 are specified on the following page.

In addition to the above phaseout schedule changes, the final regulation implements a number of additional amendments to the existing phaseout regulations as follows:

- The final rule now permits an exemption from the allowance requirements for the production of ozone-depleting chemicals if such production is inadvertent or coincidental during a manufacturing process. Also, these inadvertent or coincidentally produced chemicals are not considered controlled substances or products if they are present in trace quantities as a result of the use of these chemicals as a process agent.

- The regulation permits production of controlled substances for transformation or destruction outside of the production and consumption allowance requirements if the destruction is achieved by one of the processes approved by the Parties to the Montreal Protocol. The following processes have been approved:

  1) liquid injection incineration
  2) reactor cracking
  3) gaseous/fume oxidation
  4) rotary kiln incineration
  5) cement kilns

- The transshipment of bulk controlled chemicals from one foreign country to another, through the United States, will not count as consumption under these regulations by the United States.

Accelerated Phaseout Schedule for Class I Ozone-Depleting Substances

Date (Jan. 1)	CFCs	Halons	Carbon Tetrachloride	Methyl Chloroform	Methyl Bromide	HBFCs
1994	25%	0%	50%	50%	100%	100%
1995	25%	0%	15%	30%	100%	100%
1996	0%	0%	0%	0%	100%	0%
1997	0%	0%	0%	0%	100%	0%
1998	0%	0%	0%	0%	100%	0%
1999	0%	0%	0%	0%	100%	0%
2000	0%	0%	0%	0%	100%	0%
2001	0%	0%	0%	0%	0%	0%

Accelerated Phaseout Schedule for Class II Ozone-Depleting Substances

Date (Jan. 1)	Affected Compounds	Restriction
2003	HCFC-141b	ban on production and consumption, except for specified exemptions
2010	HCFC-142b HCFC-22	production and consumption frozen at baseline levels; ban on the production and consumption of virgin chemical unless used as feedstock or refrigerant in appliances manufactured prior to January 1, 2010
2015	all other HCFCs	production and consumption frozen at baseline levels; ban on the production and consumption of virgin chemical unless used as feedstock or refrigerant in appliances manufactured prior to January 1, 2020
2020	HCFC-142b HCFC-22	ban on production and consumption, except for specified exemptions
2030	all other HCFCs	ban on production and consumption, except for specified exemptions

- The import and export of recycled or used controlled substances will no longer be considered consumption by the United States.

- The regulation implements a new definition of importer to ensure that the owner, not necessarily the "importer of record," is responsible for the import.

- The regulation simplifies and reduces the reporting and recordkeeping requirements for companies dealing in controlled substances.

- The regulation exempts controlled substances used for feedstock purposes from the requirements. No allowances are needed when producing or importing these substances for feedstock uses.

- Finally, this regulation includes various trade provisions required by the Montreal Protocol to encourage countries to join the Protocol by prohibiting trade of bulk controlled substances and products containing controlled substances with non-parties.

Effective Date

The effective date of this regulation is January 1, 1994.

For More Information

The Stratospheric Ozone Information Hotline is able to provide copies of the rule as published in the *Federal Register* on December 10, 1993. The *Federal Register* is available in university and government libraries. If you wish to receive a copy of the final rule from the Hotline, please call 1-800-296-1996.

EPA
United States
Environmental Protection
Agency
(6205-J)
Washington, DC 20460